

Title (en)
METHODS OF FABRICATING FLAT GLASS WITH LOW LEVELS OF WARP

Title (de)
VERFAHREN ZUR HERSTELLUNG VON FLACHGLAS MIT GERINGEM VERZUG

Title (fr)
PROCÉDÉS DE FABRICATION DE VERRE PLAT AVEC DES NIVEAUX FAIBLES DE DÉFORMATION

Publication
EP 1934149 B1 20111012 (EN)

Application
EP 06813784 A 20060825

Priority
• US 2006033296 W 20060825
• US 23356505 A 20050922

Abstract (en)
[origin: US2007062219A1] A method of fabricating glass sheets (13) is provided in which the sheets are cut from a glass ribbon (15) composed of a glass having a glass transition temperature range (GTTR). The ribbon (15) is formed by a drawing process in which edge rollers (27 a ,27 b) contact the glass ribbon (15) at a location along the length of the ribbon where the temperature along the center line (17) of the ribbon (15) is above the GTTR. The edge rollers (27 a ,27 b) locally cool the ribbon (15), and the cooling produces a sine wave type buckling (S-warp) along the edges of the glass sheets (13). The S-warp is reduced or eliminated by heating the bead portions (21 a , 21 b) of the ribbon (15) and/or portions of the ribbon (the S-warp portions 25 a and 25 b) which are located next to the bead portions (21 a , 21 b) and/or by cooling the center portion of the ribbon (15) at least one location along the length of the ribbon (15) where the temperature at the ribbon's center line (17) is within the GTTR.

IPC 8 full level
C03B 17/06 (2006.01); **C03B 18/22** (2006.01)

CPC (source: EP KR US)
C03B 17/06 (2013.01 - KR); **C03B 17/067** (2013.01 - EP US); **C03B 18/22** (2013.01 - EP KR US); **Y02P 40/57** (2015.11 - EP US)

Designated contracting state (EPC)
DE FR

DOCDB simple family (publication)
US 2007062219 A1 20070322; CN 101312918 A 20081126; CN 101312918 B 20120404; EP 1934149 A1 20080625; EP 1934149 B1 20111012; JP 2009508803 A 20090305; JP 5137206 B2 20130206; KR 101201181 B1 20121113; KR 20080047620 A 20080529; TW 200728216 A 20070801; TW I319382 B 20100111; WO 2007037871 A1 20070405

DOCDB simple family (application)
US 23356505 A 20050922; CN 200680035207 A 20060825; EP 06813784 A 20060825; JP 2008532236 A 20060825; KR 20087009521 A 20060825; TW 95134905 A 20060920; US 2006033296 W 20060825